

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/012280 A1

(51) International Patent Classification⁷: **C07D 319/08, C07C 233/54, C07D 213/82, A61K 31/192, 31/4402, 31/4406, 31/194, 31/381, A61P 3/00, 29/00**

(74) Agent: SERONO INTERNATIONAL SA; Intellectual Property Department, HASSA, Juergen, 12, Chemin des Aulx, CH-1228 Plan-les-Ouates (CH).

(21) International Application Number:
PCT/EP2004/051557

(22) International Filing Date: 20 July 2004 (20.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03102235.3 21 July 2003 (21.07.2003) EP
60/517,993 6 November 2003 (06.11.2003) US

(71) Applicant (for all designated States except US): APPLIED RESEARCH SYSTEMS ARS HOLDING N.V. [NL/NL]; Pietermaai 15, AN-Curacao (AN).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SWINNEN, Dominique [BE/FR]; 65 Allée du Clos Romance, F-74160 Beaumont (FR). GERBER, Patrick [CH/CH]; Route de l'Abbaye, CH-1138 Villars sous Yens (CH). GONZALEZ, Jérôme [FR/FR]; 28 Rue du Chablais, F-74100 Annemasse (FR). BOMBRUN, Agnès [FR/FR]; 1153 Route du Salève, F-74560 Monnetier-Mornex (FR). JORAND-LEBRUN, Catherine [FR/FR]; Chef Lieu, F-74270 Contamine-Sarzin (FR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

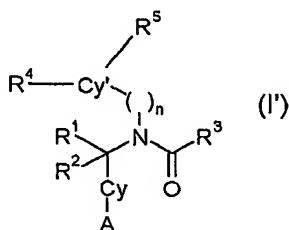
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A1 (54) Title: ALKYNYL ARYL CARBOXAMIDES



(57) Abstract: The present invention is related to alkynyl aryl carboxamides of Formula (I') and use thereof for the treatment and/or prevention of an inflammatory disorder, obesity and/or metabolic disorders mediated by insulin resistance or hyperglycemia, comprising diabetes type I and/or II, inadequate glucose tolerance, insulin resistance, hyperlipidemia, hypertriglyceridemia-hypercholesterolemia, polycystic ovary syndrome (PCOS). In particular, the present invention is related to the use of alkynyl aryl carboxamides of Formula (I') to modulate, notably to inhibit the activity of PTPs. (I') A is a C₂-C₁₅ alkynyl, C₂-C₆-alkynyl aryl, C₂-C₆-alkynyl heteroaryl. Cy is an aryl, heteroaryl, cycloalkyl or heterocycle group; n is either 0 or 1. Cy' is an aryl, which may optionally be fused by a 3-8 membered cycloalkyl. R¹ and R² are independently from each other and selected from the group consisting of hydrogen or (C₁-C₆)alkyl. R⁴ and R⁵ are each independently from each other selected from the group consisting of H, hydroxy, C₁-C₆ alkyl, carboxy, C₁-C₆ alkoxy, C₁-C₃ alkyl carboxy, C₂-C₃ alkenyl carboxy, C₂-C₃ alkynyl carboxy, amino or R⁴ and R⁵ may form an unsaturated or saturated heterocyclic ring, whereby at least one of R⁴ or R⁵ is not a hydrogen or C₁-C₆ alkyl.

WO 2005/012280 A1